DOCUMENT RESUME

ED 422 627 EA 029 305

AUTHOR Smith, Nancy J.

TITLE Texas Trends in Education: Texas Assessment of Academic Skills, 1994-1997.

PUB DATE 1998-04-00

NOTE 62p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Diego, CA, April 13-17, 1998).

PUB TYPE Numerical/Quantitative Data (110) -- Reports - Research (143) -- Speeches/Meeting Papers (150)

EDRS PRICE EDRS Price MF01 Plus Postage. PC Not Available from EDRS.

DESCRIPTORS *Academic Achievement; Academic Standards; *Comparative Testing; Educational Status Comparison; Elementary Secondary Education; Longitudinal Studies; *Norm Referenced Tests; Tables (Data); Testing; *Trend Analysis

IDENTIFIERS *Texas; *Texas Assessment of Academic Skills

ABSTRACT

The Texas Assessment of Academic Skills (TAAS) study describes either 3- or 4-year trends in average campus-level passing rates on TAAS at all grade levels. It discusses student, teacher, campus, and district characteristics as they may relate to student success on TAAS by looking at data for students in grades 4, 8, and 10 for four consecutive academic years. By examining a cohort of eighth-grade students and tracking in retrospect their performance in seventh and sixth grades, the report details student, teacher, campus, and district characteristics as they may relate to continued student success on the TAAS over time. The second and third components of the analysis view education features in ways consistent with previous research efforts so as to make meaningful comparisons. Key characteristics are grouped into categories of contexts, such as campus size and district wealth. The results show that statewide passing rates on the TAAS increased each year from 1992-93 through 1996-97. The findings indicate that school practices and processes are integrally related to TAAS performance at each grade level. Numerous tables and appendices provide detailed descriptions of the data. (RJM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 422 627

Texas Trends in Education:

Texas Assessment of Academic Skills 1994-1997

Nancy J. Smith

Paper Presented at the Annual Conference of the

American Educational Research Association

San Diego, CA

April 13, 1998

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
✓ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

N. J. Smith

2B

EA 029 305

Executive Summary

The *Texas Trends in Education: Texas Assessment of Academic Skills 1994-1997* (*Trends/TAAS*) study serves three purposes. First, the study describes statewide 3- or 4-year *trends* in average campus-level passing rates on TAAS at all grade levels. Second, the study describes student, teacher, campus, and district characteristics as they may relate to student success on TAAS, by looking at data for students in Grades 4, 8, and 10 for four consecutive academic years (1993-94, 1994-95, 1995-96, and 1996-97) to examine their inter-relationships. Third, the study describes student, teacher, campus, and district characteristics as they may relate to *continued* student success on TAAS over time. This is accomplished by examining a cohort of 8th grade students in the 1995-96 school year and tracking in retrospect their performance in 7th and 6th grades (1994-95 and 1993-94 respectively) to identify the potential inter-relationships.

For the second and third components of the study, features being examined were viewed in ways consistent with previous STEPS research efforts. Key characteristics were grouped into categories of contexts, such as campus size and district wealth; system inputs, such as teacher qualifications and student demographics; educational processes, such as student turnover and attendance; and student achievement (product) as measured by student performance on TAAS.

In Texas, statewide passing rates on the Texas Assessment of Academic Skills (TAAS) for Grades 4, 8, and 10 increased each year from 1992-93 through 1996-97. The average campus-level passing rates (all grades inclusive) increased each year from 1992-93 through 1996-97 in all areas. For Grades 4, 8, and 10 in particular, the average campus-level passing rates increased in all areas for all grade levels. Since the 1994-95 school year, more schools were rated as *Exemplary* or *Recognized* in the Academic Excellence Indicator System (AEIS) and fewer were rated as *Low Performing*. Taken collectively, these results are strongly indicative of systemwide improvement in student learning.

Programs and processes experienced at the individual student level — such as school attendance, being designated as "at risk," or being economically disadvantaged — dominated the relationships to TAAS performance explored within this research, particularly at Grade 8.

Description of TAAS Trends

- Statewide passing rates in Grades 4, 8, and 10 increased each year from 1992-93 through 1996-97.

- Average campus-level passing rates (all grades included) increased each year from 1992-93 through 1996-97 for "all tests taken," for mathematics, reading, and for writing.

- Similar to results for all grade levels combined, average campus-level passing rates for students in Grades 4, 8, and 10 increased each year from 1993-94 through 1996-97 for "all tests taken," mathematics, and writing.

- Students identified as economically disadvantaged in Grade 4, who had participated in Texas public Prekindergarten (PreK), have a slightly higher passing rate on the Grade 4 TAAS than did similar students without PreK experience.

- The percentage of students on campus identified as limited English proficient (LEP), but whose scores were included in the integrated accountability system and were reported in the Academic Excellence Indicator System (AEIS), increased in 1996-97 in Grades 4, 8, and 10 over the three previous academic years.

- Over 50 percent of 8th grade students from the 1995-96 school year passed the TAAS mathematics tests in Grades 6, 7, and 8.

- Just over two-thirds (67%) of 8th grade students from the 1995-96 school year passed the TAAS reading tests in Grades 6, 7, and 8.

Features Related to Three Years of TAAS Performance at Grades 4, 8, and 10

- Campus turnover rate (student movement into and out of a given school; TEA, 1997b) has a strong relationship with average campus-level passing rates in Grades 8 and 10. Generally, as one increases, the other declines.

- The percentages of students on campus who are identified as (a) ethnic minorities, (b) economically disadvantaged, and/or (c) at risk were strongly and inversely related to average campus-level passing rates at Grade 8 from 1993-94 through 1995-96 and moderately related in 1996-97, moderately related at Grade 4, and weakly related at Grade 10. Again, as these school-level features become more prominent, aggregate TAAS performance at Grades 4, 8, or 10 declines (although at varying rates).

- The *combination* of characteristics that accounted for most of the variation in campus-level passing rates generally included:
    - ⇒ campus turnover rate,
    - ⇒ the percentage of students on campus designated as at risk,
    - ⇒ the percentage of students on campus designated as economically disadvantaged,
    - ⇒ student attendance rates,
    - ⇒ the percentage of students receiving gifted and talented services, and
    - ⇒ the campus AEIS advanced course index, for Grade 10 only, that indicates the percentage of students enrolled on campus who participated in at least one advanced course.

Features Related to Consistent TAAS Success in Grades 6, 7, and 8

- When tracking a cohort of students across Grades 6, 7, and 8, the *combination* of characteristics that accounted for most of the variation in the percentage of students on campus who exhibited *continued* success on the TAAS tests included:
  - ⇒ the type (elementary, middle/junior high, high school) of campus,
  - ⇒ the percentage of students identified as at risk,
  - ⇒ the percentage of students identified as economically disadvantaged,
  - ⇒ the percentage of students identified as LEP,
  - ⇒ the percentage of female students, and
  - ⇒ the percentage of students receiving gifted and talented services.

- In 1996, 8th grade students who passed the TAAS mathematics and/or reading tests in Grades 6, 7, and 8 generally attended campuses with:
  - ⇒ lower turnover rates,
  - ⇒ lower district instructional expenditures per pupil,
  - ⇒ higher district wealth,
  - ⇒ fewer students identified as LEP,
  - ⇒ fewer students identified as economically disadvantaged,
  - ⇒ fewer minority students,
  - ⇒ fewer students receiving Title I services,
  - ⇒ lower student grade-level retention rates,
  - ⇒ higher student attendance rates,
  - ⇒ fewer minority teachers,
  - ⇒ more teachers with advanced degrees, and
  - ⇒ more teachers with 5 or more years of experience.

The consistency of findings throughout this study indicates that school practices and processes (e.g., identification and provision of Title I services, special education services, gifted and talented, etc.) are integrally related to TAAS performance at each grade level, but to different degrees. More initiative should be expended to find the best balances between the participants' needs (districts, campuses, teachers, and students) and the processes and practices that are promoted for each grade level on each campus.

The most significant implication of this study is that the identification of, and provision of services to, children who are economically disadvantaged and/or limited English proficient must continue. The demographic trends that project increasing proportions of children with these characteristics entering the state's public schools strongly reinforce the importance of this message.

As a fundamental measure of students' academic performance in Texas, scores on the Texas Assessment of Academic Skills (TAAS) receive close attention at the family, school, district, and state levels. For this reason, *Texas Trends in Education: Texas Assessment of Academic Skills 1994-1997* has been produced to provide information about the academic performance of Texas students and will be produced annually as an ongoing progress report. The introductory section will (a) provide a review of the TAAS testing program, (b) provide a context for understanding state and national level policies or initiatives that have affected the development of systems for measuring student performance, and (c) discuss existing research on TAAS performance.

Description of TAAS Testing Program

The TAAS testing program was first implemented in the 1990-91 school year (TEC §39.023). The program measures academic skills in writing, reading, mathematics, science, and social studies, and gauges higher-order thinking and problem solving skills (TEA, 1997f). Expansion of the assessment program is both underway and planned, in terms of secondary level end-of-course examinations, Spanish language versions of the TAAS tests at Grades 3-6, and alternative assessment of students receiving special education services (TEA, 1997c; TEC §39.023(b)).

Predecessors to the TAAS program include the Texas Assessment of Basic Skills (TABS), begun in 1980, followed by the Texas Educational Assessment of Minimum Skills (TEAMS) in 1985. TABS and TEAMS each measured minimum basic competencies in reading, writing, and mathematics (TEA, 1997f).

TAAS tests are administered to students in Grades 3-8 and 10 (Grade 10 is the first opportunity to take the "Exit Level" test that students must pass to graduate from high school). Currently, the specific learning objectives targeted by TAAS are anchored to the essential elements outlined in the *State Board of Education Rules for Curriculum* (19 TAC §75). TAAS subject area tests measure broad objectives that are

consistent across grades and measure instructional targets that should have been mastered prior to the time of testing (TEA, 1995d, p. 37). The list of TAAS subject area tests and the grade levels at which they are administered are covered in the *Policy Research Report: Expanding the Scope of the Texas Public School Accountability System* (TEA, 1997c). In addition, end-of-course examinations are being phased in for students who complete specific secondary-level courses (Algebra I, Biology I, English II, and United States History; TEC §39.023). Test exemptions are permitted for limited English proficient students and students receiving special education services under specific conditions.

The Texas Learning Index (TLI) is a recently developed scale score used in the state assessment program that allows for comparison of student achievement both across years within grade level, and across grade levels within the subject areas of mathematics and reading only. The minimum passing score of 70 represents the same amount of achievement at each grade tested and at each administration. Thus, the TLI can be used to assess learning progress within a subject area and across grades (TEA, 1996e, p. 18). The TLI was computed for the first time to report the 1993-94 results for reading and mathematics at Grades 3-8 and at the Exit Level (Grade 10) (TEA, 1996e, p. 18).

Before new items are incorporated into the TAAS test, they go through an extensive review process. All items are reviewed by content experts, TEA staff, and committees comprised of educational staff prior to pilot testing(TEA, 1997g, p. 6). After committee review, all potential items are then field tested by a sample of students around the state. After field testing, items are bench-marked (i.e., standards for use are set), and the items are then incorporated in future test administrations (TEA, 1997g, p. 6).

National Initiatives and Policies Linked to TAAS

Academics 2000. The Academics 2000 Education Improvement Plan (TEA, 1995b) is the Texas initiative under the nationwide Goals 2000 effort. The purpose of the plan is to raise the level of academic achievement of all Texas students by ensuring that each child will achieve early mastery in the foundation subjects (objectives 1-5 of the plan) of reading, English language arts, mathematics, social studies, and

science (TEA, 1995a, p. viii). The plan's sixth objective requires the comparison of academic performance in Texas to national and international performance, and the nationally norm-referenced Metropolitan Achievement Tests (MAT-7) are administered to a statewide sample of students in Grades 3-8 and 10 to accomplish this purpose.

Ed-Flex. Texas was selected in June 1995 to participate in the Education Flexibility Partnership Demonstration Program (Ed-Flex). Through authority granted under the national Goals 2000 legislation (TEA, 1996b), the commissioner of education may exercise the waiver authority given to the U.S. secretary of education over specific federal programs. Specifically, the commissioner has used his waiver authority to reduce or eliminate procedural requirements in exchange for improved student performance. TAAS results are the primary means by which effectiveness of Ed-Flex waivers will be evaluated.

Improving America's Schools Act of 1994. Currently, the Title I, Part A federal funds enable schools to provide opportunities for educationally disadvantaged children to acquire the knowledge and skills in the state content standards and to meet the state performance standards (based on TAAS results) developed for all children. Formerly, the state was required to administer a norm-referenced test and evaluate three years of data to measure the success of the Title I program. Title I, Part A funding has been widely used in Texas to provide districts with supplemental education programs, school wide programs, and programs to increase staff development and parental involvement.

State Initiatives and Policies Linked to TAAS

TAAS and accountability. TAAS is a high-stakes assessment program, with clear consequences for results at both the individual and school/district levels. Student-level accountability refers to the requirement that students must pass the exit-level examination in order to graduate from high school (TEC §39.025) and, even at earlier grade levels, students who fail any portion of the TAAS tests must be identified as at risk (TEC §29.081(d); TEA, 1996e, p. 11). The "at risk" designator requires districts to

provide accelerated instruction to students who have not mastered the appropriate skills for their grade level (TEC §§29.081(b), 39.024(b)).

In 1989, the State Board of Education (SBOE) adopted campus performance indicators (per TEC §21.7531, 1989), and in 1990-91, the first Academic Excellence Indicator System (AEIS) campus-, district-, and state-level reports were produced (TEA, 1996e, pp. 13-14), with the AEIS being refined over the years as the basis for the state's integrated accountability system. The AEIS emphasizes student performance on a series of indicators, recognizes diversity of instructional programs, requires local responsibility, and promotes instructional flexibility (TEA, 1996e).

By 1993, aggregate test data were being used as one of the three base indicator measures of campus and school district accountability for student learning in the integrated accountability system (TEC §39.051; TEA, 1996e, p. 11). That is, aggregate information about TAAS performance at the campus and district level is one determinant of campus accountability ratings and district accreditation status (TEA, 1996e). The base indicators measure: 1) TAAS passing rates for all students and all student groups, 2) dropout rates for all students and all student groups (secondary level only), and 3) attendance (TEA, 1996e). Further, TLI results also are used to determine comparable improvement measures within the integrated accountability system (TEC §39.051(c)). State sanctions are triggered in response to poor performance on base indicators, including loss of accreditation status (TEC §39.073). Rewards also are tied to TAAS passing rates and TLI performance: the Texas Successful Schools Awards System (TSSAS; TEC §§39.091-.096) is a financial rewards program that considers high performances as well as high performance gains.

Alternative assessment. In addition to addressing exemptions for students who are either limited English proficient (LEP) or identified for special education (TEC §39.027(a)-(b); 19 TAC §101.3), the readoption of the Texas Education Code (TEC) in 1995 required the commissioner of education to develop and propose an assessment system for both students with disabilities and for LEP students (90 percent of whom are Spanish speakers) who were currently exempt from TAAS (TEC §39.027(c)). To date, state policy has permitted testing accommodations that would not invalidate the tests for students with special

needs (19 TAC §89.1055). Students in Grades 3-8, and 10 identified for special education services may be exempted from TAAS if this is specified in the students' Individual Education Plans (IEPs).

Currently, three options exist from which the Language Proficiency Assessment Committee (LPAC) must choose for a LEP student in Grades 3-8. For up to three years, the student may be (1) exempted from the TAAS and administered an alternative assessment, or (2) administered the Spanish version of the TAAS. The third option is to administer the English TAAS. The Spanish TAAS was administered at Grades 3-6 in 1995-96 as part of either the field test or benchmark administrations (TEA, 1997c). About 15 percent of LEP students took the Spanish TAAS in 1995-96.

Exclusions. For a student's TAAS results to be included in the accountability system and AEIS reports for a given academic year, the student must have been enrolled in the district where he/she took TAAS by the last Friday in October of that school year. Districts with high numbers of students enrolling late in the school year should not be adversely affected as a result (TEA, 1997c, p. 6). Some campuses are not rated or not included in district ratings as a result of the grade level configuration, the population served, and/or the point during the school year in which the campus opens (TEA, 1997c, p. 9).

Increasing standards. In conjunction with the implementation of TAAS and AEIS in the 1990s, the SBOE established a more rigorous curriculum for high school students by phasing out lower-level or remedial courses in language arts and mathematics and raising high school graduation requirements. Similarly, the standards on TAAS performance that must be met to maintain acceptable accreditation status already have increased and are scheduled to continue increasing through the year 2000.

Program Development. Senate Bill 1, passed by the 74th Texas Legislature in 1995, established a new Texas Education Code that called for the identification of essential knowledge and skills (TEC §29.002) in each subject of the foundation curricula (English language arts, mathematics, science, and social studies) and the enrichment curricula (other languages, health, physical education, fine arts, economics, career and technology, and technology) that all students should be able to demonstrate (TEA,

1996b, p. 40). As a result, the Texas Essential Knowledge and Skills (TEKS) was adopted by the State Board of Education in spring and summer of 1997 and is expected to be implemented in September 1998. As a result of the new guidelines, statewide assessment instruments — particularly the TAAS — and textbooks will be required to be aligned with the TEKS, although this will have to take place over the next few years.

Exclusions, exemptions, and alternative assessment are ongoing issues that will continue to be addressed by the commissioner of education in light of recent relevant legislative action (TEA, 1997c, p. 25). The effects of these new policies and policy changes, intended to increase standards and accountability, should over time correspond with improved TAAS performance for all students and all student groups.

Existing Research on TAAS

Prior TAAS performance. From 1992-93 through 1996-97, between 45 percent (1992-93) and 66 percent (1996-97) of eighth grade students passed "all tests taken" (i.e., all tests attempted). Most students in Grades 3, 5, 6, and 7 attempt two tests: reading and mathematics. For Grades 4 and 10 students usually attempt three tests: reading, mathematics, and writing. Students in Grade 8 can attempt up to five tests: reading, mathematics, writing, science, and social studies. Absences and exemptions can reduce the number of tests attempted). The TEA Student Assessment Division noted that the vast majority of students (approximately 88%) who fail the 8th-grade TAAS examination also are likely to fail the exit-level TAAS exam. The converse also is true (TEA, 1997g). The report concludes that schools must identify and target those 8th graders in need of remediation as soon as possible following notification of results on the 8th grade TAAS.

Student mobility. Student mobility has been shown to have an inverse relationship to student performance on TAAS (TEA, 1997a, pp. 1-4). That is, higher school-level student turnover rates (the proportion of student moves into and out of the campus to cumulative enrollment for the school year) were associated with lower TAAS passing rates and lower TLI scores.

Campus strategies. In 1995, TEA identified several Texas school districts with large gains in the percentages of students passing the TAAS mathematics tests at the elementary grades. These districts were asked to share the strategies they used to achieve such improvements (TEA, 1995c). While the experiences at each of these districts were unique, themes common to most included the explicit identification of high expectations for teachers and students, a more extensive use of data from prior TAAS administrations, and the creation of additional avenues of communication among educators. In a similar vein, a 1995 TEA study explored ways in which three effective campuses, with concentrated populations of minority and economically disadvantaged students, responded to the new expectations for performance. Effective strategies identified on these campuses included a shared vision, sense of purpose, and commitment; interdependence within the system among teachers, and between teachers and parents; and both academic and non-academic support for the students (TEA, 1996d).

Dropout rates. Since 1993-94, on average, 30 percent of all dropouts from public education in Texas have been 9th grade students (TEA, 1997d, p. 6; TEA, 1996e, p. 6; TEA, 1995b, p. 7). The majority of students who drop out each year are overaged (approximately 80%), identified as at risk (38-47%), and/or identified as economically disadvantaged (33%) (TEA, 1997d, p. 8). The percentage of at risk and/or economically disadvantaged students who drop out has been declining over the last four years. However, the percentage of students who receive Title I services and who drop out has sharply increased since 1993-94, from 4 percent in 1993-94 to 11 percent in 1995-96 (TEA, 1997d, p. 8).

Description of the Study

The *Texas Trends in Education: Texas Assessment of Academic Skills 1994-1996* (*Trends/TAAS*) report continues the Statewide Texas Educational Progress Study (STEPS) project. STEPS is intended to identify relationships among contextual, input, and process characteristics associated consistently over time with successful students and schools. Such information should prove valuable to both policymakers and practitioners concerned with improving school effectiveness.

On a broad level, the *Trends/TAAS* study focuses on:

- establishing demographic, program participation, and performance trends to serve as a baseline in future studies;
- building models of dynamic relationships among context, input, process, and product variables; and
- developing a more complete understanding of the progress of the public education system as a whole.

This study describes current trends in TAAS performance statewide. Then, it explores the salient features of students, teachers, campuses, and districts associated with student success on the TAAS. Related especially to the second and third broad purposes listed above, the study specifically addresses a series of research questions. Table 1 summarizes the research plans and is organized in relation to the research questions. All analyses were concerned with aggregate campus-level performance on TAAS.

--- Insert Table 1 about here ---

The research questions were drawn in part from previous research that demonstrated the value of identifying characteristics of students, schools, and schooling that relate to performance (Elley, 1994; Hanushek, 1994; TEA, 1997e). The characteristics included in the research (see Table 2) were selected to represent

contextual characteristics of schooling (e.g., district type, campus size), inputs (e.g., percentage of students on campus who are ethnic minorities, percentage of students who are economically disadvantaged), and the processes of schooling (e.g., attendance and retention rates). Because attendance rates and dropout rates so closely mirror each other and this study focuses on students who are enrolled in public schools and participate in TAAS testing, student attendance rates but not dropout rates were included in the list of process characteristics to be evaluated.

--- Insert Table 2 about here ---

Definition of Key Terms

- *District type* is an indicator of type of district (e.g., major urban, major suburban, rural, etc.).
- *Campus type* identifies the campus as elementary, middle/junior high, secondary, or K-12.
- *Campus turnover rate* is defined as the ratio between the number of times that students moved in or out of the campus during the year, to the school's cumulative enrollment.
- *Campus correspondence index* compares the ethnic makeup of the teaching force of each campus with the ethnic makeup of the students on that campus. The value of the index can range from zero to 100. A value of 100 represents a teaching force that matches the ethnicity of the students on the campus, whatever the ethnic makeup of the student body.
- *Campus course diversity index* is a measure of the number of students who enroll in advanced courses on a campus *and* the diversity of advanced course offerings across subject areas on the campus. The index can range from 0.0 to 0.9 (it cannot equal 1.0). As the index increases, the campus diversity of the advanced course offerings, either in terms of the number of students participating in such courses or the number of subject areas involved, increases. The index is used to compare course diversity offerings across campuses or across years for one campus.
- *Campus AEIS advanced course index* is the ratio of the number of students on a high school campus who *complete* at least one advanced course to the number of students who complete at least one course of any type.
- *District curriculum development and staff development costs* are those costs associated with developing curriculum and providing training to instructional staff. The average district expenditures increased dramatically in 1996-97 perhaps due to the development of the new Texas Essential Knowledge and Skills curriculum.
- *Exclusions from the accountability system* occur when a student's TAAS answer sheet is marked "Do Not Score." Exclusions occur when a student is absent on the day of testing or when his/her performance on the test is otherwise deemed to be an invalid representation.
- *Exemptions from the accountability system* occur when a student is exempted from taking the TAAS or having his/her results included in the accountability system either because the student is receiving special education services or because the student is limited English proficient.

Results

TAAS Trends

Figure 1 shows that the statewide passing rates for "all tests taken" have steadily risen over the five-year period between 1992-93 and 1996-97 for Grades 4, 8, and 10.

--- Insert Figure 1 about here ---

From 1993-94 through the 1996-97 school year (the years for which TAAS data are most comparable), statewide TAAS passing rates on each subject area test and "all tests taken" (excludes TAAS sections if absent or exempted) have increased each year for students in Grades 4, 8, and 10 (TEA, 1997e). As shown in Figures 2, 3, and 4, the gap between campus-level passing rates for White students and other student groups is decreasing in Grades 4, 8, and 10. Generally, White students have experienced the smallest growth in passing scores within each grade level, while African American students experienced the largest consistent gains. The percentage of students who passed the mathematics test increased 14 points for White students in Grades 8 and 10, and 29 points for African American and Hispanic students in Grade 4 (TEA, 1997e). Improvement in reading passing rates ranged from five points for White students in Grades 4 and 8, to 17 points for African Americans in Grade 10 (TEA, 1997e). The range for students who passed the writing test increased by one percentage point for White students in Grade 4, to 17 points for African American students in Grade 8 (TEA, 1997e).

---- Insert Figures 2, 3, and 4 about here -----

As indicated in the 1997 statewide TAAS results, passing rates from three years (1994-95, 1995-96, and 1996-97) indicate that growing percentages of students are passing the Grade 8 science and social studies tests. The statewide passing rates tend to be lower in general for social studies than for science, and the *increases* in passing rates are smaller for social studies as well. Improvement in science passing rates across

the three years ranged from four points for White students to 13 points for African American and economically disadvantaged students. Improvement in social studies passing rates ranged from two points for economically disadvantaged students to four points for African American students (TEA, 1997e).

As Figure 5 shows, the average campus-level passing rates — regardless of grade level — for "all tests taken," mathematics, reading, and writing have consistently increased over the five-year period spanning 1992-93 through 1996-97.

---Insert Figure 5 about here ---

As shown in Figure 6, the average campus-level passing rates for "all tests taken" increased each year from 1993-94 through 1996-97. When aggregated by campus, the results by year are slightly higher than when aggregated statewide (see Figure 1 above) for Grades 8 and 10, but are the same for Grade 4. Similar trends were observed for mathematics, reading, and writing.

--- Insert Figure 6 about here ---

Characteristics of examinees. Across four academic years (1993-94, 1994-95, 1995-96, and 1996-97), the percentages of students in Grades 4, 8, and 10 who received services in special education, bilingual education, English as a second language (ESL), and the gifted and talented program *increased* within each grade level. In most areas, the increase was slight (a growth of one to three percentage points) over three years; however, the percentage of students who received Title I services increased sharply in 1995-96 at Grades 4 and 8 (14 percentage points in Grade 4; 11 percentage points in Grade 8).

In the same time period, small increases also were seen in the percentages of students in Grades 4, 8, and 10 who were identified as LEP and economically disadvantaged. However, the percentage of students identified as at risk declined in 1995-96 after increasing in 1994-95 for Grades 4 and 10. The percentage of students identified as at risk in Grade 8 steadily declined each year.

Appendix A summarizes campus-level descriptive statistics about students, teachers, the schools and their districts for all campuses in the state that served Grades 4, 8, and/or 10 during the 1993-94, 1994-95, 1995-96, and 1996-97 academic years.

Findings Related to Prekindergarten and Early Childhood Education

Prekindergarten and early childhood education. Districts are required to provide an Early Childhood Education (ECE) program to children who are at least three years old, but less than six years old, who qualify for special education services (TEC, §29.009) . In addition, Prekindergarten (PreK) programs are offered to children who are at least three years old who are unable to speak and comprehend English, are educationally disadvantaged, or homeless (TEC, §29.125). There were 292,191 Grade 4 students in Texas public schools during the 1995-96 school year, and 69,345 of them (23.7%) had participated in either the ECE or Prekindergarten (PreK) programs during the 1989-90, 1990-91, and/or 1991-92 school years. The vast majority of these students had participated in PreK; a small percentage (approximately 5%) had participated in ECE, and a nominal few had participated in both PreK and ECE.

Students who had participated in ECE and/or PreK were more often identified as LEP, economically disadvantaged, or at risk. They also were more likely as 4th graders to receive special services (Title I, special education, or bilingual education) than students who had not participated, as indicated in Table 3, with the exception of gifted and talented services. This is to be expected, given the state criteria for PreK program eligibility.

--- Insert Table 3 about here ---

A comparison of TAAS passing rates for students who were identified as economically disadvantaged in Grade 4 and who participated in the PreK program, with similar fourth grade students who had not participated in PreK, revealed that 1% more of the PreK "alumnae" passed each TAAS core subject five years after their PreK experiences. The passing rates for students who were *not* identified as economically

disadvantaged and who had not participated in PreK were substantially higher (84% mathematics, 84% reading, and 90% writing).

Findings Related to Accountability Exclusions

Results for 29 percent of the Grade 4 students were either exempted or excluded (as specified below) from the accountability system in 1993-94 used to rate campus and district performance. Those students were: (a) exempted as a result of receiving special education services or being identified as LEP, (b) absent on the day(s) of the test administration, or (c) excluded for other, often highly individualized and/or situation-specific reasons. The exclusion rate remained relatively stable in all subject areas for students in Grade 4 through 1996-97. There were slight variations in the percentages of students who were either exempted or excluded from the TAAS tests in Grades 8 and 10 between 1993-94 and 1996-97, with approximately 27% being exempted or excluded in Grade 8 and 24%-25% in Grade 10. Results of the Spanish TAAS have not yet been included in the accountability system.

Students who receive special education services are not included in the accountability system. Trends since 1993-94 have shown that while participation in special education services has declined in Grades 8 and 10, exemptions approved by Admission, Review, and Dismissal (ARD) committees increased in Grade 10 in all subjects and in Grade 8 mathematics. The LEP participation and exemptions rates tended to decrease as grade level increased. There are no LEP exemptions in Grade 10.

Findings Related to Specific Research Questions

Question A: How strong are the relationships between TAAS campus-level passing rates and particular student, teacher, campus, and district characteristics?

Answer: Most are weak; the moderate to strongly related characteristics are shown in Table 4.

The direct relationships among various context, input, and process characteristics (summarized in Table 2) and the campus-level passing rates for the mathematics, reading, and writing tests, and for "all tests taken," were examined for students who were enrolled in Grades 4, 8, and 10 for four academic years (1993-94, 1994-95, 1995-96, and 1996-97). Within each grade, the strength and direction of the relationships (positive or negative) between the context, input, and process characteristics and campus performance on TAAS tended to be consistent across subject areas and for "all tests taken." Most characteristics proved to have a weak relationship with TAAS passing rates. Table 4 displays the context, input, and process characteristics that had at least a moderate relationship (.40 to .60) with TAAS passing rates for at least one grade level.

--- Insert Table 4 about here ---

Campus-level turnover rate held a strong negative correlation to 8th and 10th grade passing rates. This is not surprising in light of earlier research on student mobility (TEA, 1997b). Also, there is a tendency for alternative campuses — with high concentrations of at-risk students enrolled — to have the highest student turnover.

Some of the greatest variety across grade levels occurred in the relationships between campus passing rates and the percentages of students on campus who were identified as economically disadvantaged, at risk, or were ethnic minorities. At Grade 8, these campus characteristics were *strongly* and *negatively* related to TAAS passing rates in 1993-94, 1994-95, and 1995-96, but were only moderately related in 1996-97. They were only moderately related in Grade 4 in all four years. By 10th grade, both the percentages of students

on campus who were economically disadvantaged and who were at risk were only weakly correlated with 10th grade TAAS passing rates, except for 1996-97 when the percentage of students who were at risk was moderately related to TAAS passing rates. As reported in the annual *Report on Public School Dropouts* (TEA, 1997b), the highest percentage of dropouts occurs at Grade 9. The common characteristics of students who dropout are being overage and/or identified as being at risk or economically disadvantaged, thus accounting for the variation in relationships between student characteristics and TAAS passing rates between grades 8 and 10.

Question B: How do specific student, teacher, campus, and district characteristics interact in their relationships with TAAS campus-level passing rates?

Answer: TAAS passing rates were subject to variation across a number of campus-level characteristics (see Tables 5, 6, and 7).

Analyses demonstrated which combination of context, input, and process features from Table 2 was most helpful in anticipating campus-level TAAS passing rates at Grades 4, 8, and 10. The analyses were applied separately to each of the three grade levels for each of the four academic years to determine if the same combination of variables consistently was related to the aggregate passing rates on TAAS.

TAAS passing rates for mathematics, reading, and "all tests taken" were consistently more strongly related to the characteristics being examined than were the pass rates for writing. Further analysis revealed that a small number of the selected characteristics accounted for a large portion of the variation in TAAS passing rates among campuses. Tables 5, 6, and 7 present for each grade level and academic year the combination of context, input, and process characteristics that largely accounted for the spread in TAAS passing rates among campuses.

--- Insert Tables 5, 6,and 7 about here ---

The percentage of students on campus who were identified as at risk was included among the characteristics that best explained the spread of average campus-level passing rates in Grades 4, 8, and 10 in all four years

studied, as was the percentage of students on campus served in the gifted and talented program. Student attendance rates, and the percentage of students on campus identified as economically disadvantaged, contributed to the explanation of passing rates for each of the three years of study in both Grades 4 and 8 for the 1993-94 through the 1995-96 school years. In 1996-97, student attendance rates did not strongly contribute to the variation in passing rates in Grade 8.

Question C: What are the trends for TAAS exemptions and score exclusions from the accountability system?

Answer: Both exemptions and exclusions declined by 1996-97.

The average percentage of students on campus identified as limited English proficient (LEP) *and* whose TAAS scores were included in the accountability system increased between 1993-94 and 1996-97 for Grades 4 and 8 (see Table 8). The percentage of LEP exemptions decreased sharply over the same four-year period, particularly in Grade 4. The percentage of ARD exemptions for students who received special education services also decreased steadily each year since 1993-94, particularly in Grade 8. The percentages of students whose TAAS results are not included in the accountability system (due to absences or some other reason) increased in Grade 4 for all three subject areas and in Grade 10 for reading and writing, but decreased for Grade 10 mathematics and in Grade 8.

--- Insert Table 8 about here ----

In 1995-96, scores for 5.8 percent of Grade 4 students who took the TAAS were excluded from the accountability system because the students were enrolled in a district other than the one in which they took the test (in April/May 1996). This is down significantly from the 10.3 percent excluded in 1993-94. Also in 1995-96, 6.2 percent of Grade 8 scores and 6.8 percent of Grade 10 scores were excluded due to student mobility, whereas in 1993-94, 10.6 percent of Grade 8 scores were excluded and 13.6 percent of Grade 10 scores were excluded from the accountability system due to student mobility.

Question D: What is the relationship between course diversity at the high school level and performance on the TAAS?

Answer: The AEIS advanced course index consistently influenced the Grade 10 campus-level TAAS passing rates (see Table 7), while the campus course diversity index did not.

The direct relationship of both the campus course diversity index (see "Definition of Key Terms") and the campus AEIS advanced course index to the TAAS passing rates for Grade 10 students was weak in each academic year, suggesting that an indicator of campus-level advanced course participation does not have a strong influence on TAAS passing rates by itself. The largest relationships were with the TAAS writing passing rates. All correlations were positive, which indicates that as the index increases, the passing rates do also. However, given the low values of the correlations, caution should be used when interpreting these results.

The campus AEIS advanced course index was consistently found to be a process characteristic that affected the variation in TAAS passing rates at Grade 10. In other words, TAAS passing rates were subject to variation based on the academic rigor of student course-taking and completion patterns. The campus course diversity index, however, was not of similar value. Many of the advanced courses offered on a campus are taken primarily in Grades 11 and 12; consequently, the campus course diversity index as defined for this study, which takes into account both the number and type of advanced courses offered and the distribution of students in these courses, might not be applicable in the context of TAAS performance.

Question E: What student, teacher, campus, and district characteristics, in combination, are associated with *continued* success on the TAAS?

Answer: Characteristics of a school's student body, such as percent at risk or percent economically disadvantaged, mattered a great deal in understanding *continued* TAAS success (see Table 9.)

Research was conducted to test several characteristics in combination for their relationships to students' *continued* success on each section of the TAAS. *Continued* success was defined as the percent of students on campus, as of 1995-96, who received a passing score on a given subject (reading, writing, mathematics) of the TAAS in three consecutive grades (Grades 6, 7, and 8). Figures 7 and 8 display the three-year pass-fail patterns for 8th grade students.

--- Insert Figures 7 and 8 about here ---

Analyses were completed separately for the mathematics and reading sections of the TAAS test. Analyses show that *continued* success is strongly related to the features displayed in Table 9. The average percentage of students on campus who were identified as at risk, economically disadvantaged, and/or LEP were identified as important inputs when explaining the percent of students on campus who consistently passed the mathematics TAAS as well as the reading TAAS. In addition, the larger percentage of female students on campus and the percentage of students on campus who were served in the gifted and talented program were important characteristics. In sum, aggregate TAAS performance at the middle grades seems heavily driven by the composition of a school's student body.

--- Insert Table 9 about here ---

Question F: What student, teacher, campus, and district characteristics are associated with pass-fail patterns across three years of TAAS administrations?

Answer: Higher individual frequencies of TAAS failures are related to district costs and retention and turnover rates.

For the mathematics section of the TAAS, over 50 percent of students received passing scores on the 6th-, 7th-, and 8th-grade administrations. Over 60 percent of the students received passing scores on the reading section across the three academic years. Tables B.1 and B.2 in Appendix B present the average values (or frequencies, as appropriate) for the context, input, and process characteristics for three groups of students: 1) those who failed the TAAS test in Grades 6, 7, and 8; 2) those who passed the test in at least one grade level and failed in at least one grade level; and 3) those who passed the test in each grade level. Figures 9 and 10 present the average campus-level percentages of students who (a) passed TAAS three consecutive years, (b) failed it three consecutive years, or (c) had mixed results over the three years, depending on campus characteristics such as accountability rating, type, or district type in terms of urbanicity.

— Insert Figures 9 and 10 about here —

Average campus turnover rates are highest among students failing TAAS for three consecutive years and lowest among students passing all three years. Similar trends were found for campus size (in terms of enrollment), campus correspondence index, and the percentages of students on campus identified as LEP, economically disadvantaged, at risk, and minority (all of these being more pronounced among continuous TAAS failers). District expenditures per pupil and district curriculum and staff development expenditures also were highest among students who failed TAAS three consecutive years and lowest among those who passed three consecutive years. This is believed to be a reflection of *need*, rather than cause: the most resources were being directed to students performing the worst. Student attendance rates were best among students who passed TAAS all three years, and worst among students who failed three consecutive years. Likewise, student retention rates were lowest among students who consistently passed TAAS and highest among students who consistently failed TAAS.

Question G: Does campus type (i.e., elementary, middle/junior high) or normative movement (from one type of campus to another) have a significant relationship with pass-fail patterns on the TAAS?

Answer: No, aggregate performance over time was similar regardless of whether or when normative moves were made (see Table 10).

As shown in Table 10, there is little variation in average TLI scores across all types of campuses, even when normative mobility across campus types was noted as a factor.

---- Insert Table 10 about here ----

On average, students who moved from elementary to middle/junior high schools (i.e., experienced normative moves) between 6th and 7th grades or 7th and 8th grades performed as well on the mathematics and reading TAAS as did students who were enrolled on the same type of campus all three years. Table 10 displays the average TLI scores (average of scores received in Grades 6, 7, and 8) for students who passed the tests all three years, who failed the test all three years, and who had mixed results, grouped by the types of schools attended over the three-year period. For both TAAS mathematics and reading (where a tie was observed), students who posted the highest mean TLI scores were those who consistently passed TAAS and had spent 6th and 7th grades on an elementary campus and 8th grade on a middle/junior high school campus.

Conclusions and Recommendations for Future Directions

Conclusions

The stage must be set for Grade 8 students to succeed on the TAAS tests and in school. Grade 8 TAAS performance is highly predictive of performance on the Exit-level (Grade 10) examination (TEA, 1997g). The strongest relationships between campus-level TAAS passing rates and particular student, teaching, and/or school characteristics were seen at Grade 8. The full import of the trends associated with Grade 8 performance should continue to be closely examined.

The strongest predictors of success on the TAAS are at the individual student level, but often are manifestations of systemic responses to individual needs or circumstances (e.g., being identified as at risk or economically disadvantaged, or identified for gifted and talented services). For instance, the increases in average campus-level passing rates at all grade levels might be associated with decreases in the percentages of students on campus who are identified as at risk, because failing TAAS is one of the criteria that can lead to a student being so identified.

Even though the percentage of students identified as at risk has decreased over the years, the percentages of students identified as economically disadvantaged and as LEP increased. Those two characteristics have an inverse relationship with TAAS performance. Consider that even though the results of this study would indicate that campus-passing rates are likely to decline with, for example, an increased percentage of LEP students on campus, the actual passing rates *increased*. Simultaneously, more TAAS scores for LEP students were included in the accountability system in 1996-97 than in the previous three years — even as the accountability system standards were raised. Under this scenario one might expect more schools to receive *Acceptable* and *Low Performing* ratings. Instead, from 1994-95 to 1995-96, and tentatively again in 1996-97 (as of August 1), more schools were rated *Exemplary* and *Recognized*, and less were rated *Low Performing*. Taken collectively, these results are strongly indicative of systemwide improvement in student learning, no doubt reflecting the efforts of teachers, children and parents throughout Texas.

Context characteristics. Campus turnover rate (at all grade levels studied) affected the average campus-level TAAS passing rates. Generally, the lower the turnover rate, the higher the passing rate. The campus correspondence index and campus type also mattered, but only at Grades 8 and 10.

Input characteristics. A review of student and teacher characteristics across four years (1993-94, 1994-95, 1995-96, and 1996-97) reveals that campuses are experiencing a growth in the number of minority students and teachers at Grades 4, 8, and 10 each year. The percentage of minority students at Grade 4 was strikingly higher than at Grades 8 and 10, reflecting state demographic trends. Also revealed was an increase in the percentage of students identified as economically disadvantaged and a decrease in the percentage of at risk students. (NB: The percentage of students served by Title I funds increased sharply in 1995-96, due to changes in funding guidelines.)

Even against the backdrop of these overall trends, the higher the percentages of students on campus who were identified as minority, economically disadvantaged, or at risk, the lower the TAAS passing rates at the campus level tended to be. Conversely, the higher the percentage of female students, the higher the passing rates were, particularly at Grade 8. Teacher qualifications (i.e., the percentages of teachers with advanced degrees or with 5 or more years of experience, and the higher the average years of teaching experience per campus) accounted for more fluctuation in TAAS passing rates at Grade 10 than at either Grade 4 or Grade 8. This may be associated in some ways with the more advanced course content being taught at Grade 10 relative to the other grade levels studied.

Process characteristics. When looking at the combination of context, input, and process characteristics that were most informative about TAAS passing rates, a few process characteristics stood out. The percentage of students participating in the gifted and talented program was identified as a significant characteristic at every grade level. Student attendance rates were more dominant at Grades 4 and 8 than Grade 10. Perhaps the impact of attendance rates decreases at Grade 10 as a reflection of students' high dropout rates at Grade 9: poor attendance is the most common reason given for dropping out

(TEA, 1997d, p. 11). The campus AEIS advanced course index is a strong indicator of Grade 10 passing rates, as is the percentage of students enrolled in the gifted and talented program. These results indicate that the students in Grade 10 may reflect a *different population* than in Grade 8, because the loss of students to dropping out restricts the variability among students who take the Exit-level examination. This means one should *expect* to see more differences than similarities between Grade 8 and Grade 10.

Recommendations

This research was based strictly on quantitative data. Consequently, indicators of qualitative differences among students and schools — such as student motivation and parent involvement/support — were not included in the analyses, even though these are important characteristics that are highly likely to influence learning. Had it been possible to include both qualitative and quantitative variables, the combinations of critical characteristics in anticipating TAAS campus-level performance may have looked very different. Given this cautionary note, the following recommendations are made.

1. In light of the overall strong relationship between student attendance and TAAS performance, attendance information should remain an integral part of the accountability system. Efforts should continue on all fronts to communicate the expectation of high attendance rates at each grade level, but particularly at the higher grade levels. Similarly, student mobility must continue to be considered in the accountability system, via use of October subset data and in the construction of comparable improvement groups.

2. The full import of the trends associated with Grade 8 performance should continue to be closely examined. Reasons for the substantial grade-level variations in TAAS exemption rates should be explored.

3. Further research should examine the relationships between Grade 4 TAAS performance and Grade 8 TAAS performance.

4. The longitudinal part of the present study should be extended to track the students who were in eighth grade in 1995-96 as they progress through high school. In four years, a significant volume of rich participation and performance data will be available, from which to draw new inferences about school practices and processes.

5. The *consistency* of findings throughout this study indicates that school practices and processes (e.g., identification and provision of Title I services, special education services, gifted and talented, etc.) are integrally related to TAAS performance at each grade level, but to different degrees at each grade level. More initiative should be expended to find the best balances between the participants' needs (districts, campuses, teachers, and students) and the processes and practices that are promoted for each grade level on each campus.

6. Finally, the most significant implication of this study is that the identification of, and provision of services to, children who are economically disadvantaged and/or limited English proficient must continue. The demographic trends that project increasing proportions of children with these characteristics entering the state's public schools strongly reinforce the importance of this message.

The essence of this report is that increasing student attendance and decreasing retention and turnover (student mobility) deserve continued attention in an effort to increase student performance as measured by the TAAS. School administrators should identify and work with high achieving students through the provision of gifted and talented programs and, in upper grade levels, the provision of advanced courses. By comparing their campus demographics to the statewide campus-level averages and comparing their campus TAAS passing rates to the statewide campus-level average TAAS passing rates, campus administrators can obtain more contextual information with which to evaluate student performance on their campus.

References

American Federation of Teachers. (1996). *Making standards matter, 1996*. Washington, DC: Author.

Elley, W. (1994). *The IEA study of reading literacy: Achievement and instruction in thirty-two school systems*. Exeter, Great Britain: Pergamon Press.

Hanushek, E. (1994). *Making schools work: Improving performance and controlling costs*. Washington, DC: The Brookings Institute.

National Education Goals Panel. (1996). *National education goals report, executive summary*. Washington, DC: Author.

Texas Administrative Code. (1996). *Title 19, Part II: Texas Education Agency*. Austin, TX: Secretary of State.

Texas Education Agency. (1995a). 1993-94 Report on public school dropouts (GE6 601 01). Austin, Texas: Author.

Texas Education Agency. (1995b). *Academics 2000, 1995 education improvement plan* (GE6 600 01). Austin, Texas: Author.

Texas Education Agency. (1995c). *TAAS keys to success in elementary school mathematics*. Austin, Texas: Author.

Texas Education Agency. (1995d). *TAAS student performance results*. Austin, Texas: Author.

Texas Education Agency. (1996a). 1994-95 Report on public school dropouts (GE6 601 08). Austin, Texas: Author.

Texas Education Agency. (1996b). *1996 Comprehensive biennial report on Texas public schools* (GE7 600 01). Austin, Texas: Author.

Texas Education Agency. (1996c). *Briefing book to the U.S. Department of Education for site visit in October, 1996*. Unpublished document.

Texas Education Agency. (1996d). *Case studies of successful campuses: Responses to a high-stakes state accountability system* (GE6 600 04). Austin, Texas: Author.

Texas Education Agency. (1996e). *The development of accountability systems nationwide and in Texas (Statewide Texas Educational Progress Study, report no. 1)* (GE6 601 07). Austin, Texas: Author.

Texas Education Agency. (1997a). *1997 Statewide TAAS results*. [On-line]. Available: WWW.TEA.STATE.TX.US

Texas Education Agency. (1997b). *A study of student mobility in Texas public schools (Statewide Texas Educational Progress Study, report no. 3)* (RE7 601 03). Austin, Texas: Author.

Texas Education Agency. (1997c). *Policy research: Expanding the scope of the Texas public school accountability system, report no. 9* (GE7 601 07). Austin, Texas: Author.

Texas Education Agency. (1997d). *1995-96 Report on public school dropouts* (GE7 601 08). Austin, TX: Author.

Texas Education Agency. (1997e). *Systemwide Elementary Reform (SER) — Grade 2 interim report (Statewide Texas Educational Progress Study, report no. 5)* (GE7 601 10). Austin, TX: Author.

Texas Education Agency. (1997f). *TAAS, interpreting assessment reports: Grades 3-8 and 10 (exit-level) and end-of-course examinations*. Austin, Texas: Author.

Texas Education Agency, National Computer Systems, Harcourt Brace Educational Measurement, and Measurement Incorporated. (1997g). *Texas student assessment program technical digest for the academic year 1995-96*. Austin, Texas: Texas Education Agency.

Texas Education Code. (1989). *Texas school law bulletin*. Austin, TX: West Publishing Company.

Texas Education Code. (1996). *Texas school law bulletin*. Austin, TX: West Publishing Company.

Table 2. Variables Included in Cross-sectional and Longitudinal Analyses

Context Variables	Input Variables	Process Variables
• District type*	• Percent minority – teachers and students	• District curriculum development and staff development costs**
• Campus type	• Percent female – teachers and students	• Campus course diversity index (applies only to Grade 10)
• Campus turnover rate	• Percent identified economically disadvantaged, at risk, LEP	• Campus AEIS advanced course index (applies only to Grade 10)
• Campus pupil:teacher ratio	• Percent of teachers with 5 or more years of experience	• Student attendance rate
• Campus enrollment	• Percent of teachers with advanced degree	• Student retention rate*
• Campus correspondence index	• District instructional costs per student	• Percent program participation (Special Education, ESL, Title I, Bilingual, Gifted & Talented)
	• District wealth*	

*Data not available for 1996-97 analyses

**Instructional staff and curriculum development costs are counted together in PEIMS data. 1996-97 budgets saw a significant increase in expenditures for curriculum development and instructional staff development.

Table 3. **Information about Students Who Were Identified as Economically Disadvantaged in Grade 4**

	Participated in Pre-K &/or ECE (N=69,345)	Did Not Participate in Pre-K &/or ECE (N=222,846)
At risk	54.3%	36.9%
Title I	68.4%	41.0%
LEP	22.3%	11.6%
Bilingual education	14.4%	7.5%
ESL	4.9%	3.2%
Special Education	18.6%	12.6%
Gifted and Talented	5.9%	9.8%
Passed TAAS Reading	65%	64%
Passed TAAS Writing	77%	76%
Passed TAAS Mathematics	65%	64%

Table 4. **Strength and Direction of Relationships Between Selected Context, Input, and Process Characteristics and Campus-level TAAS Passing Rates**

		Grade Level					
		4		8		10	
Type	Specific Characteristic	Strength	Direction	Strength	Direction	Strength	Direction
Context	Campus turnover rate			**strong**	-	**strong**	-
Inputs	Percent of students identified as:						
	-minority	*Moderate*	-	**strong**†	-	*moderate*	-
	-economically disadvantaged	*Moderate*	-	**strong**†	-		
	-at risk	*Moderate*	-	**strong**†	-		
	Percent of teachers identified as Minority			*moderate*††	-	*moderate*††	-
Process	Percent of students receiving the following services:						
	-Title I	*Moderate*	-	*moderate*††	-		
	-English as a Second Language			*moderate*††	-		
	Student attendance rate			*moderate*	+	*moderate*	+
	Student retention rate**					*moderate**	-

*Moderate relationship with writing passing rates; weak relationships with passing rates for mathematics, reading, and "all tests taken."

** Data not available for 1996-97 analyses

†Relationships were **strong** for 1993-94 through 1995-96 and *moderate* for 1996-97.

††Relationships were *moderate* for 1993-94 through 1995-96 and weak for 1996-97.

KEY: "**Strong**" = correlation coefficients from .61 to 1.00
"*Moderate*" = correlation coefficients from .40 to .60.
Blank = correlation coefficients less than .40
"+" = positive correlation coefficients (as A rises so will B).
"-" = negative correlation coefficients (as A rises, B generally declines).

NOTE: These are ASSOCIATIVE, not causal, relationships.

Table 5. Combination of Characteristics That Best Accounts for Spread of TAAS Scores at Grade 4, "All Tests Taken"

	1993-94	1994-95	1995-96	1996-97
Context	**Campus turnover rate***	**Campus turnover rate**	**Campus turnover rate**	**Campus turnover rate**
			Campus size	Campus size
				Campus pupil:teacher ratio
Inputs	**% Female teachers on campus**	**% Female teachers on campus**	**% Female teachers on campus**	
	% At risk students on campus	**% At risk students on campus**	**% At risk students on campus**	**% At risk students on campus**
	% Economically disadvantaged students on campus	**% Economically disadvantaged students on campus**	**% Economically disadvantaged students on campus**	**% Economically disadvantaged students on campus**
	% Minority students on campus	% Teachers on campus with 5 or more years of experience	**% Minority students on campus**	**% Minority students on campus**
			% LEP students on campus	% LEP students on campus
			% Female students on campus	% Teachers with 5 or more years of experience
				% Teachers with advanced degree
				Average years of teacher experience
Process	**% Identified Special Education students on campus**	**% Identified Special Education students on campus**	**% Identified Special Education students on campus**	**% Identified Special Education students on campus**
	% Gifted and Talented students on campus	**% Gifted and Talented students on campus**	**% Gifted and Talented students on campus**	**% Gifted and Talented students on campus**
	Average student attendance rate	**Average student attendance rate**	**Average student attendance rate**	**Average student attendance rate**
	Average curriculum and staff development costs	% English as a second language (ESL) students on campus		Average curriculum and staff development costs
		% Bilingual education students on campus		
Performance statistically explained (R^2)	42.3%	50.5%	43.7%	45.8%

*Bold identifies characteristics that were significant in at least three academic years.

NOTE: R^2 is a computation to determine the amount of spread in TAAS performance that can be accounted for by this combination of characteristics.

33

Table 6. Combination of Characteristics That Best Accounts for Spread of TAAS Scores at Grade 8, "All Tests Taken"

	1993-94	1994-95	1995-96	1996-97
Context	Campus correspondence index	Campus turnover rate	Campus correspondence index	Campus turnover rate
	Campus pupil teacher ratio		Campus type	Campus type
Inputs	**% At risk students on campus***	**% At risk students on campus**	**% At risk students on campus**	**% At risk students on campus**
	% Economically disadvantaged students on campus	**% Economically disadvantaged students on campus**	**% Economically disadvantaged students on campus**	**% Economically disadvantaged students on campus**
	% Female teachers on campus	**% Female students on campus**	**% Female students on campus**	**% Female students on campus**
	% Minority teachers on campus	% Teachers on campus with 5 or more years of experience	% Minority teachers on campus	% Minority students on campus
		% Female teachers on campus		% Teachers with advanced degree
		% Minority students on campus		
Process	**% Gifted and Talented students on campus**	**% Gifted and Talented students on campus**	**% Gifted and Talented students on campus**	**% Gifted and Talented students on campus**
	Average student attendance rate	**Average student attendance rate**	**Average student attendance rate**	
	% Title I students on campus	% Identified Special Education students on campus		Average district instructional expenditures per student
	Average curriculum and staff development costs			Average curriculum and staff development costs
Performance statistically explained (R^2)	65.0%	67.7%	68.4%	66.0%

*Bold identifies characteristics that were significant in at least three academic years.

NOTE: R^2 a computation to determine the amount of spread in TAAS performance that can be accounted for by this combination of characteristics.

Table 7. Combination of Characteristics That Best Accounts for Spread of TAAS Scores at Grade 10, "All Tests Taken"

	1993-94	1994-95	1995-96	1996-97
Context	**Campus turnover rate***	**Campus turnover rate**	**Campus turnover rate**	**Campus turnover rate**
	Campus type	Campus type	Campus correspondence index	
	Campus correspondence index	Campus size		
Inputs	**% At risk students on campus**	**% At risk students on campus**	**% At risk students on campus**	**% At risk students on campus**
	% Economically disadvantaged students on campus	% Teachers on campus with advanced degree	% Teachers on campus with advanced degree	% Minority students on campus
	% Minority students on campus	% Minority teachers on campus	% Minority teachers on campus	% Female students on campus
	% Teachers on campus with 5 or more years of experience	% Female students on campus		
	Average number of years teaching experience on campus			
Process	**% Gifted and Talented students on campus**	**% Gifted and Talented students on campus**	**% Gifted and Talented students on campus**	**% Gifted and Talented students on campus**
	Campus AEIS advanced course index	**Campus AEIS advanced course index**	**Campus AEIS advanced course index**	**Campus AEIS advanced course index**
		Average student attendance rate	**Average student attendance rate**	**Average student attendance rate**
			% Title I students on campus	% ESL students on campus
Performance statistically explained (R^2)	44.6%	51.1%	51.1%	63.5%

*Bold identifies characteristics that were significant in at least three academic years.

NOTE: R^2 is a computation to determine the amount of spread in TAAS performance that can be accounted for by this combination of characteristics.

Table 8. **Average Percentage of Students Per Campus Whose TAAS Scores Are Either Included, Excluded, or Exempt from Accountability System***

	Grade 4				Grade 8				Grade 10			
	94	95	96	97	94	95	96	97	94	95	96	97
Special Education in PEIMS, answer sheet coded with Special Education exemption (excluded)												
Mathematics	8.8	9.3	7.6	7.4	7.3	10.4	7.9	7.9	10.3	11.7	10.5	9.9
Reading	9.4	9.9	8.5	8.5	9.1	10.2	7.8	7.7	10.0	11.5	10.4	9.7
Writing	9.5	10.3	9.1	9.2	9.7	10.5	8.5	8.1	10.2	11.5	10.6	9.9
Special Education in PEIMS, but no "Do Not Score" codes (excluded)												
Mathematics	5.6	5.8	8.3	9.1	4.7	5.5	7.9	8.6	4.3	5.2	5.9	7.0
Reading	5.0	5.2	7.5	8.0	4.7	5.6	7.9	8.7	4.4	5.3	5.9	7.2
Writing	5.0	4.9	6.9	7.7	5.1	5.5	7.6	8.3	4.3	5.2	5.9	7.1
Special Education in PEIMS, answer sheet coded "Do Not Score" for reason other than ARD exemption (excluded)												
Mathematics	1.3	1.5	1.4	1.4	2.5	2.3	2.4	2.2	0.7	0.7	1.1	1.3
Reading	1.3	1.4	1.3	1.4	2.5	2.3	2.5	2.2	0.8	0.9	1.3	1.3
Writing	1.2	1.3	1.3	1.0	1.6	2.2	2.1	2.3	0.7	1.0	1.0	1.2
Not Special Education in PEIMS, answer sheet coded with Special Education exemption (exempt)												
Mathematics	0.6	0.3	0.2	0.2	0.4	0.2	0.1	0.2	0.4	0.0	0.0	0.0
Reading	0.6	0.3	0.2	0.2	0.4	0.2	0.1	0.1	0.4	0.0	0.0	0.0
Writing	0.5	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.5	0.0	0.0	0.0
LEP but not Special Education in PEIMS, answer sheet coded as LEP exemption (exempt)												
Mathematics	5.1	6.1	4.6	2.9	2.0	2.0	1.9	1.5	*No*			
Reading	5.1	6.2	4.6	3.0	2.0	2.0	1.8	1.5	*exemptions*			
Writing	5.2	6.4	4.6	3.1	1.5	1.7	1.9	1.6	*permitted*			
LEP but not Special Education in PEIMS, answer sheet scored (included)												
Mathematics	3.8	3.6	4.0	5.2	2.6	2.6	2.8	3.1	3.2	3.0	3.0	3.2
Reading	3.8	3.6	4.0	5.1	2.6	2.8	2.9	3.1	3.1	3.0	2.9	3.3
Writing	4.0	3.6	4.1	5.4	2.8	2.7	2.9	3.2	3.1	3.0	2.9	3.2
Not Special Education or LEP in PEIMS, answer sheet coded "Do Not Score" for reason other than LEP or ARD (excluded)												
Mathematics	3.4	3.8	4.1	3.8	6.7	6.8	6.9	6.5	5.4	5.7	5.6	5.7
Reading	3.6	3.8	4.1	3.8	7.1	6.2	6.7	6.1	6.2	7.3	7.1	7.5
Writing	2.8	3.5	2.9	3.1	7.3	6.8	6.4	6.9	6.8	7.7	7.5	7.9
Not Special Education or LEP, answer sheet scored (included)												
Mathematics	71.6	70.4	70.4	70.4	74.0	73.8	73.0	72.9	78.8	78.5	78.2	77.4
Reading	71.3	70.4	70.4	70.4	73.7	74.0	73.3	73.3	78.1	76.9	76.7	75.6
Writing	72.2	70.7	71.7	71.1	74.6	73.8	73.4	72.5	77.4	76.5	76.3	75.2

*Information based on October subset. *Denominator is based on the total number of TAAS answer sheets received for students in the applicable grades on each campus. *Information shown does not include all combinations of PEIMS and answer sheet score codes

Table 9. **Characteristics That Best Account for Variability Among Percent of 8th Graders on Campus Passing TAAS for Three Consecutive Years**

Type	Mathematics	Reading
Context	**Campus type**	**Campus type**
	Campus correspondence index	Campus size
Inputs	**% At risk students on campus**	**% At risk students on campus**
	% Economically disadvantaged on campus	**% Economically disadvantaged students on campus**
	% LEP students on campus	**% LEP students on campus**
	% Female students on campus	**% Female students on campus**
	% Minority teachers on campus	
	Average years teaching experience on Campus	
Process	**% Gifted and Talented students on campus**	**% Gifted and Talented students on campus**
	% ESL students on campus	Student attendance rate
Performance statistically explained (R^2)	63.1%	64.9%

*__Bold__ identifies characteristics that were significant in both subject areas.
NOTE: R^2 is a computation to determine the amount of spread in TAAS performance that can be accounted for by this combination of characteristics.

Table 10. Average TLI Scores for Students Grouped by 3-Year TAAS Performance and by Campus Types Over the Same Time Period

	Mathematics					
	Failed All 3 Years		Inconsistent Passes		Passed All 3 Years	
Campus Types Over 3 Years	Mean	N	Mean	N	Mean	N
Stable or Non-normative Movement*:						
K-12 all 3 years	55.2	319	69.7	555	82.9	1,282
Middle all 3 years	53.6	30,258	69.1	33,381	83.0	69,972
Elementary all 3 years	55.5	258	70.2	412	83.1	979
Normative Movement:						
Elementary 2 years, then Middle	54.6	60	69.8	98	83.7	244
Elementary 1 year, then Middle	53.8	8,366	69.1	10,391	82.9	21,664
Mixed Types, probably non-normative	53.6	2,752	68.9	3,092	82.7	5,856
	Reading					
	Failed All 3 Years		Inconsistent Passes		Passed All 3 Years	
Campus Types Over 3 Years	Mean	N	Mean	N	Mean	N
Stable or Non-normative Movement:						
K-12 all 3 years	55.7	151	71.1	435	87.4	1,514
Middle all 3 years	54.4	13,620	70.0	28,926	87.5	87,002
Elementary all 3 years	54.8	93	71.1	336	87.7	1,178
Normative Movement:						
Elementary 2 years, then Middle	55.4	22	71.3	87	87.7	284
Elementary 1 year, then Middle	54.7	4,124	70.0	8,893	87.5	26,174
Mixed Types, probably non-normative	54.4	1,169	70.0	2,690	87.3	7,387

* Normative moves occur when students move from one campus to another due to the grade-level configurations on the campus. Non-normative moves occur when students move from one campus to another for a different reason.

Appendix A. Average* Campus-level Values for Context, Input, and Process Characteristics

	Characteristic	Academic Year	Grade 4	Grade 8	Grade 10
Context	Campus enrollment	1996-97	534.53	501.99	759.45
		1995-96	530.83	536.51	729.30
		1994-95	528.01	538.50	733.77
		1993-94	526.46	533.90	740.68
	Campus turnover rate	1996-97	27.17	35.75	41.45
		1995-96	25.73	26.35	32.91
		1994-95	25.33	25.58	31.05
		1993-94	25.51	25.81	28.67
	Campus pupil:teacher ratio	1996-97	15.62	13.59	13.77
		1995-96	15.66	13.66	13.45
		1994-95	15.63	13.99	13.33
		1993-94	15.81	14.24	13.50
	Campus correspondence index**	1996-97	30.84	31.96	32.48
		1995-96	25.45	24.09	23.46
		1994-95	29.30	28.40	27.31
		1993-94	28.92	27.76	27.01
Inputs	Average percentage of female students on campus	1996-97	47.96	45.83	47.78
		1995-96	48.77	48.33	48.62
		1994-95	48.84	48.51	49.69
		1993-94	48.54	48.75	48.44
	Average percentage of male students on campus	1996-97	52.04	54.17	52.23
		1995-96	51.39	52.31	52.15
		1994-95	51.33	52.09	51.12
		1993-94	51.51	51.79	52.24
	Average percentage of minority students on campus	1996-97	54.26	47.75	45.98
		1995-96	51.70	43.86	41.62
		1994-95	50.71	42.97	40.11
		1993-94	49.90	42.10	40.03
	Average percentage of African American students on campus	1996-97	14.87	12.17	13.11
		1995-96	13.91	11.17	11.13
		1994-95	13.97	11.50	11.33
		1993-94	13.67	11.50	11.06
	Average percentage of Hispanic students on campus	1996-97	37.16	33.99	31.35
		1995-96	35.71	31.11	29.02
		1994-95	34.71	29.85	27.42
		1993-94	34.22	29.12	27.59

* Because the percentages are aggregated across several campuses when appropriate and then averaged, corresponding proportions (e.g., male/female) will not sum exactly to 100 percent.

***Campus correspondence index* compares the ethnic makeup of the teaching force of each campus with the ethnic makeup of the students on that campus. The value of the index can range from zero to 100. A value of 100 represents a teaching force that matches the ethnicity of the students on the campus, whatever the ethnic makeup of the student body.

	Characteristic	Academic Year	Grade 4	Grade 8	Grade 10
Inputs continued	Average percentage of White students on campus	1996-97	45.74	52.24	54.02
		1995-96	48.30	56.14	58.38
		1994-95	49.29	57.03	59.89
		1993-94	50.10	57.90	59.97
	Average percentage of economically disadvantaged students on campus	1996-97	55.33	43.65	34.44
		1995-96	53.98	42.92	33.38
		1994-95	53.25	41.65	33.24
		1993-94	51.90	40.46	32.37
	Average percentage of at risk students on campus	1996-97	41.72	39.85	47.12
		1995-96	41.17	42.79	45.38
		1994-95	46.52	45.41	49.29
		1993-94	44.38	50.65	45.99
	Average percentage of limited English proficient students (LEP) on campus	1996-97	13.95	6.50	4.84
		1995-96	12.89	6.09	4.42
		1994-95	11.39	5.89	4.53
		1993-94	11.39	5.48	4.58
	Average percentage of female teachers on campus	1996-97	88.20	64.29	53.61
		1995-96	89.88	66.96	57.43
		1994-95	90.58	67.07	57.21
		1993-94	90.67	66.74	57.04
	Average percentage of male teachers on campus	1996-97	10.78	32.46	39.65
		1995-96	11.37	33.54	43.16
		1994-95	10.93	33.37	43.24
		1993-94	10.92	33.82	43.28
	Average percentage of minority teachers on campus	1996-97	25.64	21.48	24.03
		1995-96	24.34	17.02	15.53
		1994-95	23.69	16.29	14.61
		1993-94	23.15	15.83	14.26
	Average percentage of African American teachers on campus	1996-97	8.22	7.22	6.97
		1995-96	7.74	6.29	5.46
		1994-95	7.87	6.18	5.48
		1993-94	7.75	6.15	5.43
	Average percentage of Hispanic teachers on campus	1996-97	15.75	10.23	9.25
		1995-96	16.01	9.99	9.24
		1994-95	15.36	9.62	8.52
		1993-94	15.01	9.26	8.38
	Average percentage of White teachers on campus	1996-97	74.37	78.52	75.97
		1995-96	75.66	82.98	84.47
		1994-95	76.31	83.71	85.39
		1993-94	76.85	84.18	85.74

	Characteristic	Academic Year	Grade 4	Grade 8	Grade 10
Inputs continued	Average percentage of teachers with advanced degree on campus	1996-97	24.84	25.36	28.43
		1995-96	24.51	24.76	28.96
		1994-95	24.99	25.52	29.79
		1993-94	25.84	26.58	30.58
	Average percentage of teachers with five or more years of experience on campus	1996-97	71.12	64.87	66.63
		1995-96	71.63	67.59	72.42
		1994-95	70.80	67.38	73.16
		1993-94	71.17	68.60	74.09
	Average years of teaching experience on campus	1996-97	11.54	11.06	12.13
		1995-96	11.42	10.96	12.14
		1994-95	11.19	10.82	12.15
		1993-94	11.11	10.88	12.17
	District expenditures on instruction per pupil	1996-97	$2,692.69	$2,755.24	$2,747.96
		1995-96	$2,887.33	$2,995.14	$3,010.47
		1994-95	$2,729.80	$2,815.98	$2,830.21
		1993-94	$2,648.00	$2,752.05	$2,766.90
	District wealth	1996-97	Data not available		
		1995-96	$188,857.12	$191,400.98	$189,153.53
		1994-95	$190,704.14	$195,877.98	$194,475.27
		1993-94	$190,502.60	$201,268.58	$200,140.28
Process	District expenditures on curriculum development and staff development costs	1996-97	$2,179,306.23	$1,321,411.70	$1,312,247.54
		1995-96	$62,303.74	$46,927.10	$41,134.43
		1994-95	$69,278.35	$54,604.11	$44,554.47
		1993-94	$15,473.00	$26,103.63	$21,914.36
	Campus course diversity index*	1996-97	n/a	n/a	.63
		1995-96	n/a	n/a	.53
		1994-95	n/a	n/a	.50
		1993-94	n/a	n/a	.48
	Campus AEIS advanced course index**	1996-97	n/a	n/a	18.14
		1995-96	n/a	n/a	15.71
		1994-95	n/a	n/a	14.18
		1993-94	n/a	n/a	12.38

**Campus course diversity index* is a measure of the number of students who enroll in advanced courses on a campus *and* the diversity of advanced course offerings across subject areas on the campus. The index can range from 0.0 to 0.9 (it cannot equal 1.0). As the index increases, the campus diversity of the advanced course offerings, either in terms of the number of students participating in such courses or the number of subject areas involved, increases. The index is used to compare course diversity offerings across campuses or across years for one campus. A campus that has 100 students enrolled in one advanced course is not better than a campus that has 10 students enrolled in 10 advanced courses.

***Campus AEIS advanced course index* is the ratio of the number of students on a high school campus who complete at least one advanced course to the number of students who complete at least one course of any type. For example, a value of 15.0 percent indicates that fifteen percent of the students on campus completed at least one advanced course.

	Characteristic	Academic Year	Grade 4	Grade 8	Grade 10
Process continued	Student retention rate	1996-97		Data not available	
		1995-96	1.08	2.07	8.71
		1994-95	0.98	1.86	7.72
		1993-94	0.98	2.19	6.68
	Student attendance rate	1996-97	96.63	94.06	91.97
		1995-96	96.64	94.77	93.16
		1994-95	96.76	94.74	93.21
		1993-94	96.76	94.84	93.36
	Average percentage of students served by Title I	1996-97	57.97	34.50	18.62
		1995-96	48.04	26.86	11.86
		1994-95	33.34	15.52	7.34
		1993-94	31.02	14.31	6.85
	Average percentage of students served by Special Education	1996-97	16.10	16.12	15.10
		1995-96	14.50	12.95	12.26
		1994-95	14.03	12.68	12.03
		1993-94	13.86	12.16	11.60
	Average percentage of students served by bilingual Education	1996-97	8.76	0.07	0.08
		1995-96	8.56	0.10	0.02
		1994-95	7.91	0.11	0.01
		1993-94	7.23	0.08	0.02
	Average percentage of students served by English as a second language program	1996-97	3.81	4.70	3.43
		1995-96	3.56	5.32	3.48
		1994-95	3.26	5.09	3.39
		1993-94	3.09	4.89	3.28
	Average percentage of students served by Gifted and Talented	1996-97	8.65	9.98	7.78
		1995-96	8.66	10.32	8.64
		1994-95	8.78	10.01	8.26
		1993-94	8.62	9.33	7.81

Appendix B.1. Descriptive Statistics of 1996 Context, Input, and Process Characteristics for TAAS *Mathematics* Test in Grades 6, 7, and 8

		Failed All 3 Years (N=38,549)*		Inconsistent Passes (N= 44,055)		Passed All 3 Years (N=93,274)	
	Mathematics	Mean	StdDev**	Mean	StdDev	Mean	StdDev
Context	Campus Enrollment	828.0	341.4	807.8	345.0	817.8	352.4
	Campus Turnover Rate	25.2	13.6	23.3	11.4	20.9	9.3
	Campus Pupil:Teacher Ratio	15.2	2.6	15.2	2.5	15.4	2.6
	Campus Correspondence Index	32.3	19.1	28.3	18.6	24.3	17.1
Inputs	District Instructional Costs per Pupil ($)	2,801.3	299.8	2,782.7	319.5	2773.3	329.0
	District Wealth ($)	163,444	121,635	170,860	139,400	187,942	175,346
	Campus Percent of:						
	LEP Students	4.2	8.2	3.1	6.9	2.1	5.4
	Economically Disadvantaged Students	49.2	24.9	42.9	24.7	34.4	23.3
	At Risk Students	47.7	17.6	43.4	17.3	37.3	17.0
	Female Students	48.6	4.2	48.7	4.1	48.9	4.1
	Minority Students	60.4	30.5	51.8	30.7	42.5	28.2
	Female Teachers	67.6	9.1	68.3	9.1	69.9	9.2
	Minority Teachers	28.4	25.8	22.9	24.6	16.5	20.4
	Teachers with Advanced Degree	26.7	11.4	26.4	11.2	27.1	11.4
	Teachers with 5+ Years of Experience	65.9	10.9	66.5	10.8	67.7	10.8
	Average Years of Experience on Campus	10.8	2.2	10.8	2.1	10.9	2.1
Process	District Staff Development Costs per Pupil ($)	5,996.4	14,753.8	5,823.8	13,537.8	5803.0	12,224
	Campus Percent of Students Served in:						
	Special Education	12.2	4.2	12.1	4.3	11.8	4.3
	Gifted & Talented	10.3	9.3	10.5	9.0	11.6	9.4
	ESL	7.5	10.6	6.1	9.5	4.5	7.8
	Title I	36.1	44.7	27.5	40.9	17.9	34.4
	Student Attendance Rate	94.4	2.0	94.7	1.6	95.2	1.4
	Student Retention Rate	2.3	2.5	2.0	2.1	1.8	1.9

*Data were available for at least this many observations.

**"StdDev" refers to "standard deviation."

Appendix B.2. Descriptive Statistics of 1996 Context, Input, and Process Characteristics for TAAS *Reading* Test in Grades 6, 7, and 8

		Failed All 3 Years (N= 19,534)*		Inconsistent Passes (N= 39,545)		Passed All 3 Years (N=117,474)	
	Reading	Mean	StdDev**	Mean	StdDev	Mean	StdDev
Context	Campus Enrollment	822.0	340.7	813.4	345.3	818.4	350.6
	Campus Turnover Rate	25.9	14.4	24.1	12.5	21.4	9.7
	Campus Pupil:Teacher Ratio	15.2	2.5	15.2	2.6	15.4	2.6
	Campus Correspondence Index	33.5	19.2	30.0	19.0	25.1	17.4
Inputs	District Instructional Costs per Pupil ($)	2,808.1	299.0	2,792.5	319.0	2,773.8	323.8
	District Wealth ($)	159,923	121,727	169,058	145,936	184,346	163,929
	Campus Percent of:						
	LEP Students	5.0	9.2	3.6	7.4	2.2	5.5
	Economically Disadvantaged Students	52.3	24.9	45.6	24.8	35.8	23.7
	At Risk Students	49.6	17.6	45.0	17.5	38.5	17.2
	Female Students	48.7	4.1	48.7	4.2	48.8	4.1
	Minority Students	63.7	30.3	55.2	30.9	44.2	28.8
	Female Teachers	66.9	9.3	67.9	9.1	70.0	9.1
	Minority Teachers	30.8	26.5	25.0	25.2	17.7	21.2
	Teachers with Advanced Degree	26.5	11.7	26.5	11.3	27.0	11.3
	Teachers with 5+ Years of Experience	65.4	11.0	66.1	10.8	67.6	10.8
	Average Years of Experience on Campus	10.8	2.2	10.8	2.1	10.9	2.1
Process	District Staff Development Costs per Pupil ($)	6,020.2	13,502.2	5,915.2	14,100.1	5,797.4	12,631
	Campus Percent of Students Served in:						
	Special Education	12.1	4.2	12.2	4.3	11.9	4.3
	Gifted & Talented	10.3	9.6	10.3	9.1	11.4	9.3
	ESL	8.5	11.6	6.7	10.0	4.7	8.0
	Title I	40.5	45.8	31.1	42.8	19.4	35.7
	Student Attendance Rate	94.2	2.1	94.6	1.8	95.1	1.5
	Student Retention Rate	2.3	2.5	2.1	2.3	1.8	1.9

*Data were available for at least this many observations.

**"StdDev" refers to "standard deviation."

Appendix B.3. Frequency Distributions of 1996 Campus and District Context Characteristics for TAAS *Mathematics* Test in Grades 6, 7, and 8

	Failed All 3 Years			Inconsistent Passes			Passed All 3 Years			Total
	Campus Count*	Student Count	% of Students	Campus Count*	Student Count	% of Students	Campus Count*	Student Count	% of Students	Student Count (100%)
Accountability rating										
Low Performing	109	919	50.8	76	456	25.2	55	434	24.0	1809
Acceptable	1090	36,822	24.1	1112	40,013	26.1	1117	76,340	49.8	153,175
Recognized	253	2,486	10.8	275	4,949	21.6	286	15,532	67.6	22,967
Exemplary	46	389	4.9	52	1,132	14.0	62	6,540	81.1	8,061
Campus Type										
K-12	175	601	20.1	182	774	25.8	187	1,621	54.1	2,996
Elementary	62	328	15.2	77	531	24.6	85	1,302	60.2	2,161
Middle/Jr. High	1086	38,672	22.0	1090	44,011	25.1	1085	92,842	52.9	175,525
Secondary	166	689	17.7	159	963	24.8	158	2,237	57.5	3,889
Unknown	5	7	41.2	3	6	35.3	1	4	23.5	17
District Type										
Major Urban	162	9,223	31.8	156	7,812	27.0	157	11,937	41.2	28,972
Major Suburban	259	9,503	17.9	253	12,278	23.2	250	31,161	58.9	52,942
Other Central City	167	6,797	23.3	157	7,239	24.9	154	15,081	51.8	29,117
Other CC Suburban	113	3,943	21.8	114	4,777	26.4	107	9,406	51.8	18,126
Independent Town	104	3,960	21.4	96	4,772	25.7	95	9,802	52.9	18,534
Non-metro Fast Growing	115	995	15.1	119	1,646	25.0	117	3,942	59.9	6,583
Non-metro Stable	233	4,694	21.1	233	5,667	25.5	229	11,863	53.4	22,224
Rural	346	1,502	16.1	388	2,361	25.3	412	5,475	58.6	9,338

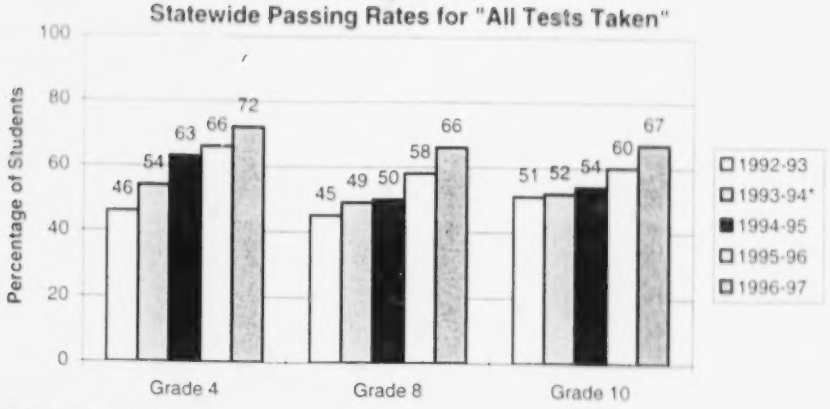
* Campuses may be duplicated across columns.

Appendix B.4. Frequency Distributions of 1996 Campus and District Context Characteristics for TAAS *Reading* Test in Grades 6, 7, and 8

	Failed All 3 Years			Inconsistent Passes			Passed All 3 Years			Total
	Campus Count*	Student Count	% of Students	Campus Count*	Student Count	% of Students	Campus Count*	Student Count	% of Students	Student Count (100%)
Accountability rating										
Low Performing	94	509	28.0	97	614	33.8	73	696	38.2	1,819
Acceptable	1025	18,194	11.9	1109	36,713	24.0	1121	98,336	64.1	153,243
Recognized	214	963	4.2	268	3,653	16.1	286	18,110	79.7	22,726
Exemplary	38	136	1.7	49	737	9.1	62	7,182	89.2	8,055
Campus Type										
K-12	121	293	9.8	184	692	23.1	197	2,016	67.1	3,001
Elementary	36	125	5.8	67	441	20.4	86	1,598	73.8	2164
Middle/Jr. High	1069	18,944	10.8	1092	39,525	22.5	1090	117,086	66.7	175,555
Secondary	138	317	8.2	172	795	20.6	162	2,752	71.2	3,864
Unknown	3	5	26.3	4	6	31.6	3	8	42.1	19
District Type										
Major Urban	162	4,827	16.6	161	7,927	27.3	160	16,266	56.1	29,020
Major Suburban	252	4,192	7.9	258	10,517	19.9	252	38,264	72.2	52,973
Other Central City	163	3,353	11.5	165	6,558	22.6	159	19,178	65.9	29,089
Other CC Suburban	111	1,990	11.0	112	4,163	23.0	110	11,918	66.0	18,071
Independent Town	102	1,948	10.5	102	4,153	22.4	97	12,432	67.1	18,533
Non-metro Fast Growing	93	457	6.9	115	1,260	19.1	118	4,874	74.0	6,591
Non-metro Stable	227	2,317	10.4	234	5,138	23.1	232	14,767	66.5	22,222
Rural	262	719	7.7	377	2,002	21.4	415	6,626	70.9	9,347

* Campuses may be duplicated across columns.

Figure 1
Statewide Passing Rates for "All Tests Taken"



*TAAS tests revised

Figure 2
Average Campus Passing Rates
for Students who Took All Sections of the TAAS
Grade 4

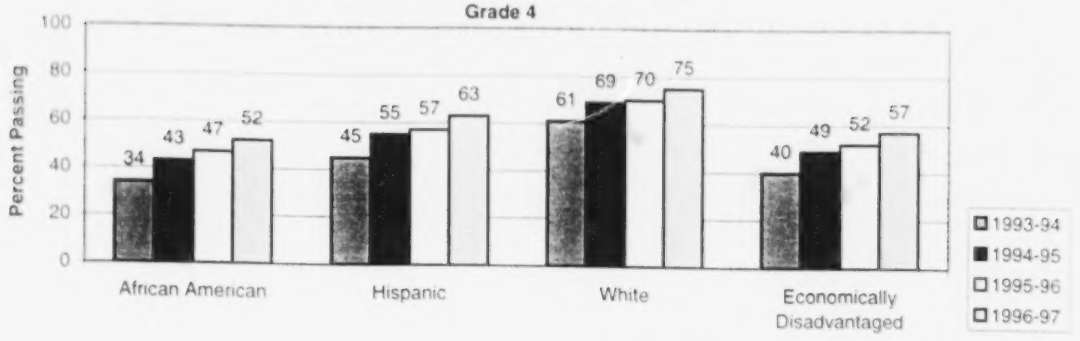


Figure 3
Average Campus Passing Rates
for Students who Took All Sections of the TAAS
Grade 8

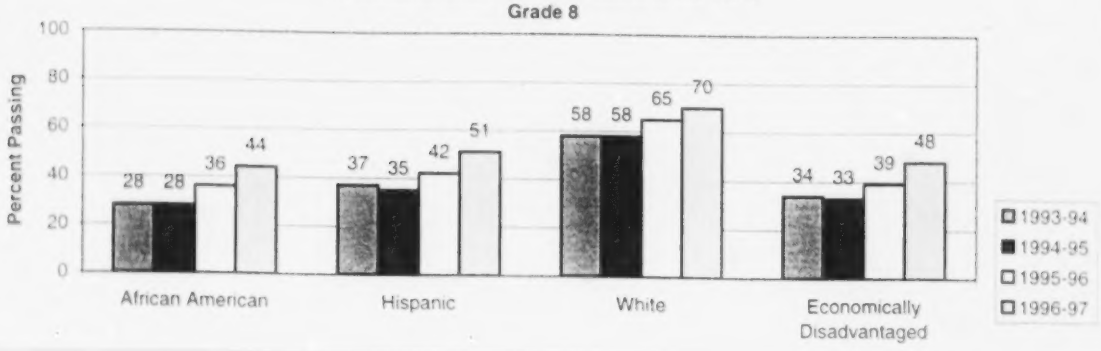


Figure 4
Average Campus Passing Rates
for Students who Took All Sections of the TAAS
Grade 10

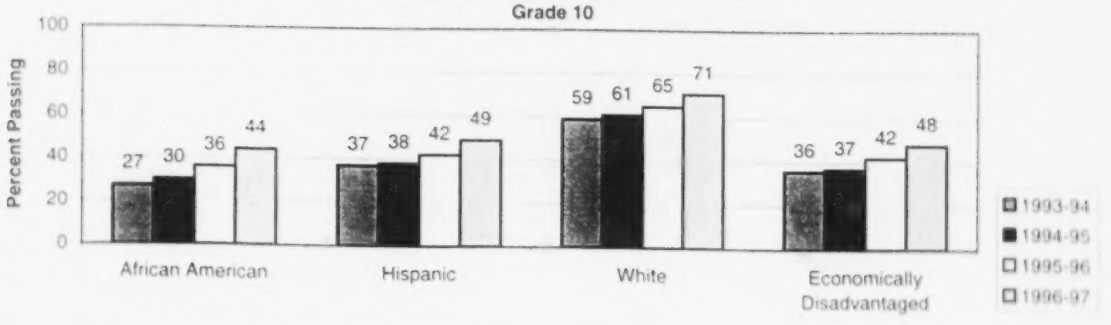
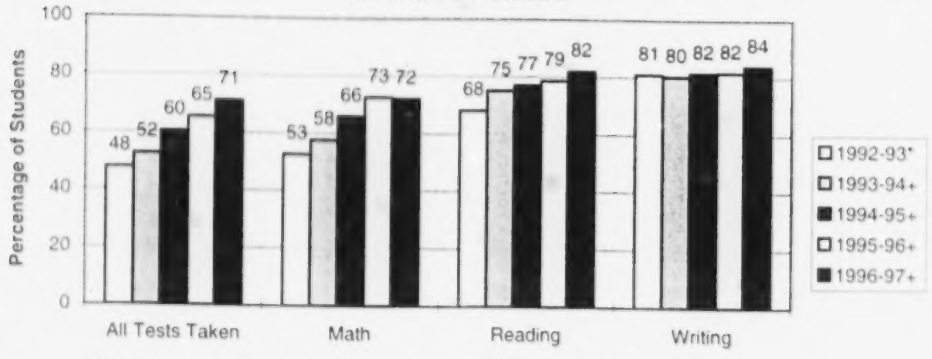


Figure 5
Average Campus-level Passing Rates
All Grades Included



*1992-93: Grades 4-8, 10; * 1993-94 through 1996-97: Grades 3-8, 10*

Figure 6
Average Campus-level Passing Rates
for "All Tests Taken"

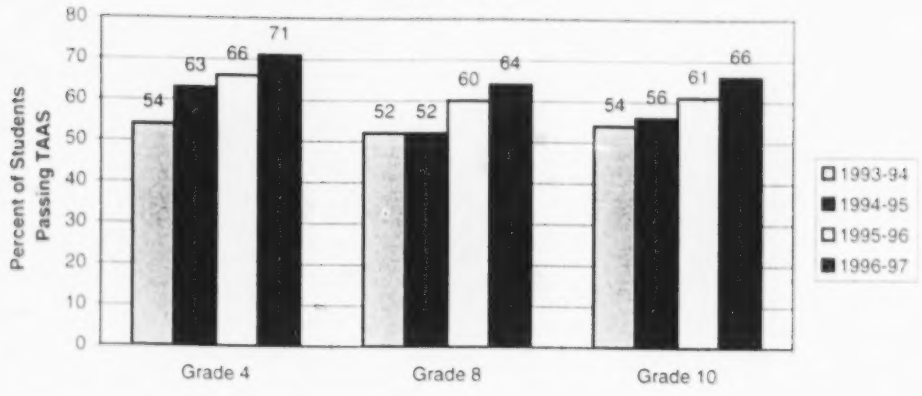


Figure 7
Three Year Pass-Fail Patterns
for Grades 6, 7, and 8

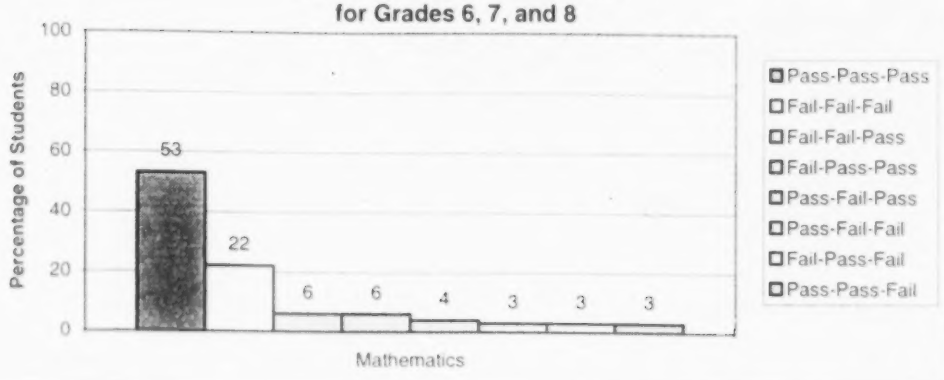


Figure 8
Three Year Pass-Fail Patterns
for Grades 6, 7, and 8

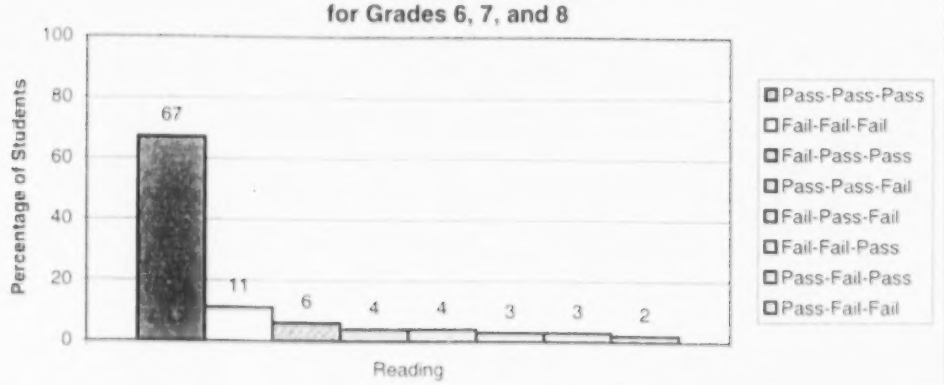


Figure 9
8th Grade Students With Three Consecutive TAAS Mathematics Scores (6th, 7th, and 8th grades)

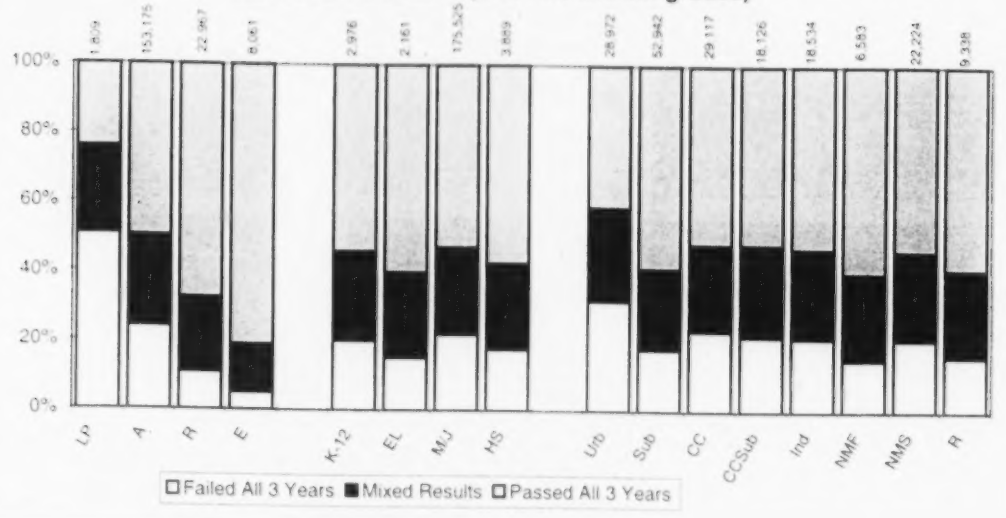


Figure 10
8th Grade Students with Three Consecutive TAAS Reading Scores (6th, 7th, and 8th grades)